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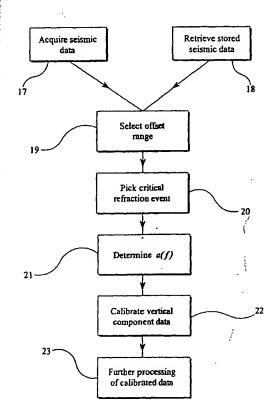
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[Continued on next page]

#### (54) Title: A METHOD OF AND APPARATUS FOR PROCESSING SEISMIC DATA



(57) Abstract: A method determining a calibration filter to calibrate a first component of multi-component seismic data relative to a second component of the seismic data comprises determining the calibration filter from a portion of the seismic data that contains only events arising from critical refraction of seismic energy. The method is particularly suitable for long-off-set data, since the first arrival will be a critical refraction event and an automatic picking method may be used. The present invention also provides a wavenumber-dependent calibration filter that is obtained from a calibration filter obtained from data in one offset range and another calibration filter obtained from data in another offset range.